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=> d his

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     FILE 'REGISTRY' ENTERED AT 13:32:47 ON 16 MAY 2002
L1             1 S GLUCOSAMINE/CN
L2             1 S 9030-45-9/RN

     FILE 'HCAPLUS' ENTERED AT 13:36:34 ON 16 MAY 2002

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L3           SEL L1 1- CHEM :       12 TERMS
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L4         19186 S L3

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L7           270 S L4 (L) L6
L8            21 S L7 (L) PREP/RL
L9            14 S L8 AND PD<19970114
L10          594 S L4 (L) PREP/RL
L11           21 S L10 (L) L6
L12           14 S L9 AND PD<19970114
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=> d ibib ab 1-14

L9 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:273580 HCAPLUS
DOCUMENT NUMBER: 129:78393
TITLE: Investigation of mechanism of nitrogen transfer in glucosamine 6-phosphate synthase with the use of transition state analogs
AUTHOR(S): Milewski, Slawomir; Hoffmann, Maria; Andruszkiewicz, Ryszard; Borowski, Edward
CORPORATE SOURCE: Department of Pharmaceutical Technology and Biochemistry, Technical University of Gdansk, Gdansk, 80-952, Pol.
SOURCE: Bioorganic Chemistry (**1997**), 25(5/6), 283-296
CODEN: BOCMBM; ISSN: 0045-2068
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several structural analogs of putative tetrahedral intermediates of the reaction catalyzed by the glutamine amide transfer domain of Candida albicans glucosamine 6-phosphate synthase have been designed and synthesized. Esters and amides of .gamma.-phosphonic and .gamma.-sulfonic analogs of glutamine and glutamic acid were tested as potential inhibitors of the enzyme. N-substituted amides, DL-Me N,N-diethyl-[3-amino-3-methoxycarbonylpropyl]-SR-phosphonamidate and DL-3-Amino-3-carboxy-N,N-diethyl-propanesulfonamide, were found to be the strongest inhibitors in the series. Structure-activity relationship studies led to conclusions supporting the possibility of a direct nucleophilic attack of the glutamine amide nitrogen on an electrophilic site of the enzyme-bound fructose 6-phosphate as the most likely mechanism of nitrogen transfer in glucosamine 6-phosphate synthase.

L9 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:181514 HCAPLUS
DOCUMENT NUMBER: 128:268094
TITLE: Glucosamine 6-P synthase and control of chitin biosynthesis in Candida albicans
AUTHOR(S): Szajowska, Agnieszka; Niedzielska, Kamilla; Milewski, Slawomir
CORPORATE SOURCE: Department Pharmaceutical Technology & Biochemistry, Technical University Gdansk, Gdansk, 80-809, Pol.
SOURCE: Adv. Chitin Sci. (**1997**), 2, 314-319
CODEN: ACSCFF
PUBLISHER: Jacques Andre
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Glucosamine-6-phosphate (GlcN-6-P) synthase catalyzes the first committed step in a chitin biosynthetic pathway in fungi. In the present communication we describe results of our studies on mechanisms of regulation of this enzyme in Candida albicans. UDP-GlcNAc inhibits GlcN-6-P synthase activity with IC50=0.67 mM but sensitivity to this inhibitor is modulated by glucose-6-phosphate. Kinetic investigations on interaction of UDP-GlcNAc with GlcN-6-P synthase revealed that the inhibitor binding site is sepd. form the enzyme active site. It was found that the 3-6 fold increase in GlcN-6-P synthase activity during yeast-to-mycelia morphol. transition, is accompanied by a rapid decrease of the enzyme sensitivity to a physiol. feedback inhibitor, UDP-GlcNAc. Activity of the purified GlcN-6-P synthase increases upon the action of cAMP-dependent protein kinase. Possible implications of these findings for understanding of mechanism of chitin biosynthesis regulation are discussed.

L9 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:51741 HCAPLUS
DOCUMENT NUMBER: 128:125152
TITLE: Glucosamine-6-phosphate synthase from Candida albicans

AUTHOR(S): Milewski, Slawomir; Smith, Rachel J.; Brown, Alistair J. P.; Gooday, Graham W.
CORPORATE SOURCE: Dep. of Pharm. Technol. and Biochem., Technical Univ. of Gdansk, Gdansk, 80-952, Pol.
SOURCE: Chitin Enzymol., Proc. Int. Symp., 2nd (**1996**), 439-446. Editor(s): Muzzarelli, Riccardo A. A. Atec Edizioni: Grottammare, Italy.
CODEN: 65LZA3
DOCUMENT TYPE: Conference
LANGUAGE: English
AB C. albicans GFA1 gene coding for glucosamine 6-phosphate synthase (I), amplified by PCR, was ligated into the pMA91 yeast shuttle vector carrying the promoter and the terminator from the PGK1 gene. S. cerevisiae YRSu3-31 transformed with the resulting plasmid YEpRC65 overproduced C. albicans I affording 10% of total cytoplasmic protein. I was purified to apparent homogeneity with 52% yield. The results of mol. wt. detns. of the native and denatured protein suggested a tetrameric structure for the biol. active enzyme. C. albicans I present in the crude ext. was a subject of allosteric inhibition by UDP-acetylglucosamine. The sensitivity to the inhibitor was lost during the purifn. procedure and by preincubation under conditions favoring the phosphoprotein phosphatase reaction. Such behavior was consistent with possible regulation of sensitivity to allosteric inhibition by a phosphorylation-dephosphorylation mechanism. I was inhibited by glutamine analogs and by a putative transition state analog, 2-amino-2-deoxy-D-glucitol 6-phosphate.

L9 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:347273 HCAPLUS
DOCUMENT NUMBER: 127:62391
TITLE: Design, Synthesis, and Evaluation of the First Mechanism-Based Inhibitor of Glucosamine 6-Phosphate Synthase
AUTHOR(S): Massiere, Frederic; Badet-Denisot, Marie-Ange; Rene, Loiec; Badet, Bernard
CORPORATE SOURCE: Institut de Chimie des Substances Naturelles, Centre National Recherche Scientifique, Gif-sur-Yvette, 91198, Fr.
SOURCE: J. Am. Chem. Soc. (**1997**), 119(24), 5748-5749
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The need to find more specific inhibitors for glucosamine 6-phosphate synthase prompted us to design glutamine derivs. bearing a latent electrophilic function. As a first result of this novel approach, we present in this paper the first mechanism-based inhibitor, L-.gamma.-glutamyl-2-[((p-difluoromethyl)phenyl)thio]glycine, referred to as compd. 1.

L9 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:294340 HCAPLUS
DOCUMENT NUMBER: 127:92165
TITLE: Affinity labeling of Escherichia coli glucosamine-6-phosphate synthase with a fructose 6-phosphate analog. Evidence for proximity between the N-terminal cysteine and the fructose-6-phosphate-binding site
AUTHOR(S): Leriche, Caroline; Badet-Denisot, Marie Ange; Badet, Bernard
CORPORATE SOURCE: Institute Chimie Substances Naturelles, Gif-sur-Yvette, F-91198, Fr.
SOURCE: Eur. J. Biochem. (**1997**), 245(2), 418-422
CODEN: EJBCAI; ISSN: 0014-2956
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glucosamine-6-phosphate synthase (GlcNP-synthase) catalyzes the formation of glucosamine 6-phosphate from fructose 6-phosphate using the .gamma.-amide functionality of glutamine as the N source. In the absence of glutamine, GlcNP-synthase catalyzes the formation of glucose 6phosphate corresponding to a phosphoglucoisomerase-like activity. Active-site directed, irreversible inhibition of Escherichia coli GlcNP-synthase (kinact = 0.60 min-1, Kirr = 1.40 mM) was reported by anhydro-1,2-hexitol 6-phosphates. Enzyme inactivation with the tritiated affinity label, followed by tryptic digestion and purifn. of the radioactive fragments, allowed identification of 3 peptides. Two of them, accounting for 54% of the recovered radioactivity, are believed to result from the nucleophilic attack of side-chain carboxylates of Glu255 and Glu258 and thiol of Cys300 of the fructose-6-phosphate-binding site on the epoxide functionality of the inhibitor. The major peptide corresponds to derivatization of the N-terminal Cys from the glutamine-binding site by the inhibitor. These results provide evidence for the close proximity of glutamine and fructose-6-phosphate-binding sites.

L9 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:43497 HCAPLUS
DOCUMENT NUMBER: 126:71905
TITLE: Characterization of L-glutamine:D-fructose-6-phosphate amidotransferase from an extreme thermophile Thermus thermophilus HB8
AUTHOR(S): Badet-Denisot, Marie-Ange; Fernandez-Herrero, Luis Angel; Berenguer, Jose; Ooi, Tatsuo; Badet, Bernard
CORPORATE SOURCE: ICSN, CNRS, Gif-sur-Ivette, 91198, Fr.
SOURCE: Arch. Biochem. Biophys. (**1997**), 337(1), 129-136
CODEN: ABBIA4; ISSN: 0003-9861
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Glutamine-fructose 6-phosphate amidotransferase (glucosamine 6-phosphate synthase) (I) from the extremophile, T. thermophilus, was purified to homogeneity from an Escherichia coli overproducer. Homodimeric I exhibited an optimum activity at 70.degree. with a half-life of 90 min at 80.degree.. Dissocn. expts. in guanidinium chloride and urea were consistent with the absence of catalytic activity of the monomer. DSC anal. of I revealed an irreversible denaturation process with a .DELTA.Hcal = 257 kcal/mol and Tm = 82.6.degree.. Antigenic cross-reaction with I was obsd. with the E. coli enzyme using monoclonal antibodies (mAbs) specific for linear epitopes of the glutamine-binding domain. However, no cross-reactivity was obsd. with an mAb specific for a native conformation of the E. coli enzyme. The Ki values of 6-diazo-5-oxo-L-norleucine and methoxyfumaroyl-L-2,3-diaminopropionic acid, potent glutamine site-directed affinity labels of the E. coli enzymes, were reduced by 2-3 orders of magnitude when tested on I, whereas the properties of 2-amino-2-deoxyglucitol 6-phosphate, a potent competitive inhibitor of the fructose 6-phosphate site, remained unaffected. These results, combined with the unexpected resistance of I to limited proteolysis, were consistent with an increase in the structural constraint of the thermophile enzyme vs. its mesophilic counterpart.

L9 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:276737 HCAPLUS
DOCUMENT NUMBER: 124:336251
TITLE: Purification and characterization of glucosamine-6-P synthase from Saccharomyces cerevisiae
AUTHOR(S): Milewski, Slawomir; Smith, Rachel J.; Brown, Alistair J. P.; Gooday, Graham W.
CORPORATE SOURCE: Department Pharmaceutical Technology and Biochemistry, Technical University Gdansk, Gdansk, 80-952, Pol.
SOURCE: Adv. Chitin Sci. (**1996**), 1, 96-101
CODEN: ACSCFF
DOCUMENT TYPE: Journal
LANGUAGE: English

AB L-glutamine:D-fructose-6-phosphate amidotransferase (GlcN-6-P synthase) EC 2.6.1.16, an enzyme catalyzing the first committed step in the biosynthetic pathway leading to the chitin precursor - UDP-GlcNAc, was isolated from Saccharomyces cerevisiae. A genetically engineered yeast strain, overexpressing GFA1 gene coding for GlcN-6-P synthase, was used as a rich source of the enzyme. Conditions were found to prevent previously obsd. substantial loss of the enzyme activity during purifn. The proposed purifn. procedure involved: prepn. of crude ext., pptn. with protamine sulfate followed by elution with pyrophosphate buffer, covalent chromatog. on Thiopropyl-Sepharose, ion exchange FPLC on MonoQ and gel filtration FPLC on Superose 6. The whole procedure could be completed in three days and afforded at least 96% pure protein with 47% recovery. The mol. wt. of the enzyme submit was found to be 79.5 kDa, by SDS-PAGE. The native enzyme is expected to be a dimer, as judged from gel filtration. The enzyme was inhibited by UDP-GlcNAc and this inhibition was found to be uncompetitive in respect to D-fructose-6-phosphate and non-competitive in respect to L-glutamine. Several glutamine analogs were tested as inhibitors and inactivators of the enzyme. Kinetic parameters of inhibition and inactivation were detd.

L9 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:786374 HCAPLUS
DOCUMENT NUMBER: 123:249853
TITLE: Amide and ester derivatives of N3-trans-epoxysuccinoyl-L-2,3-diaminopropanoic acid: inhibitors of glucosamine-6-phosphate synthase
AUTHOR(S): Andruszkiewicz, Ryszard; Milewski, Stawomir; Borowski, Edward
CORPORATE SOURCE: Dep. Pharmaceutical Technology Biochem., Technical University Gdansk, Gdansk, 80-952, Pol.
SOURCE: J. Enzyme Inhib. (**1995**), 9(2), 123-33
CODEN: ENINEG; ISSN: 8755-5093
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several analogs 5, 6, 7, 8, 10 and 11 of the C-terminal fragment of a peptide antibiotic Sch 37137 were designed and tested as inhibitors of glucosamine-6-phosphate synthase from Saccharomyces cerevisiae. From IC50 values and kinetic parameters of inhibition of glucosamine-6-phosphate synthase by compds. 5-11 it has been found that the inhibitory potency of these compds. follows the order: 6 > 5 > 8 > 9 > 7, 10, 11. This suggests that an inhibitor with a primary amido group binds better to the active site of the enzyme than other inhibitors. The order of reactivity of compds. 5-11 may be attributed to a steric inability of the inhibitor to fit into the active site of the enzyme and also indicates the importance of the chirality of trans-epoxysuccinic acid on the inhibitory properties of the synthesized compds.

L9 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:545181 HCAPLUS
DOCUMENT NUMBER: 123:163925
TITLE: Nitrogen transfer in E. coli glucosamine-6P synthase. Investigations using substrate and bisubstrate analogs
AUTHOR(S): Badet-Denisot, Marie-Ange; Leriche, Caroline; Massiere, Frederic; Badet, Bernard
CORPORATE SOURCE: Institut Chimie Substances Naturelles, CNRS, Gif-sur-Yvette, 91198, Fr.
SOURCE: Bioorg. Med. Chem. Lett. (**1995**), 5(8), 815-20
CODEN: BMCLE8; ISSN: 0960-894X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The compd. 2-amino-2-deoxyglucitol-6P competitively inhibits E. coli glucosamine-6P synthase with respect to fructose-6P whereas glutamate .gamma.-semialdehyde is a competitive inhibitor with respect to glutamine. These compds., which exhibit good inhibitory properties (Km/Ki = 16 and 1000 resp.), were used in the synthesis of multisubstrate analogs.

L9 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:656274 HCAPLUS
DOCUMENT NUMBER: 121:256274
TITLE: Synthesis and biological activities of peptides containing N3-(S)-2-bromosuccinamoyl-(S)-2,3-diaminopropanoic acid
AUTHOR(S): Andruszkiewicz, R.; Chmara, H.; Zieniawa, T.; Borowski, E.
CORPORATE SOURCE: Dep. Pharm. Technol. Biochem., Tech. Univ. Gdansk, Gdansk, 80-952, Pol.
SOURCE: Eur. J. Med. Chem. (**1994**), 29(1), 61-7
CODEN: EJMCA5; ISSN: 0223-5234
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of peptides I (R = H, H-Ala, H-Met, H-Lys-Nva, H-His-Nva, H-Nva-Nva, R1 = OH; R = H-Nva, R1 = OH, Nva-OH; R = H, R1 = Nva-Nva-OH) contg. the title residue, a novel selective inhibitor of glucosamine-6-phosphate synthase were synthesized and evaluated in vitro for antimicrobial activity against selected bacterial and fungal strains including dermatophytes. All the peptides were active against a broad range of bacteria and fungi. Tripeptides exhibited remarkable anticandidal activity.

L9 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:152177 HCAPLUS
DOCUMENT NUMBER: 116:152177
TITLE: Stereoselective synthesis of the 6-phosphono analog of fructose 6-phosphate
AUTHOR(S): Corizzi, Valerie; Badet, Bernard; Badet-Denisot, Marie Ange
CORPORATE SOURCE: Lab. Bioorg. Biotechnol., ENSCP, Paris, Fr.
SOURCE: J. Chem. Soc., Chem. Commun. (**1992**), (2), 189-90
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:152177
AB Title compd. I was synthesized exploiting the reactivity of the fructose deriv. II, which is easily available on a large scale from saccharose; introduction of the phosphonic group by Abruzov reaction using di-Ph Et phosphite followed by deprotection afforded the title compd. I was tested as a substrate of glucosamine synthase.

L9 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:515045 HCAPLUS
DOCUMENT NUMBER: 115:115045
TITLE: Synthesis and evaluation of inhibitors for Escherichia coli glucosamine-6-phosphate synthase
AUTHOR(S): Auvin, Serge; Cochet, Olivier; Kucharczyk, Nathalie; Le Goffic, Francois; Badet, Bernard
CORPORATE SOURCE: Lab. Bioorg. Biotechnol., ENSCP, Paris, 75231, Fr.
SOURCE: Bioorg. Chem. (**1991**), 19(2), 143-51
CODEN: BOCMBM; ISSN: 0045-2068
DOCUMENT TYPE: Journal
LANGUAGE: English
AB (S)-RCH2CONH(CH2)nCH(NH2)CO2H (I; R = Cl, Br, iodo; n = 1-3) and II (n = 1-3) were prepd. as potential affinity labels of E. coli glucosamine 6-phosphate synthase (III). I (R = Cl, Br, n = 1) and II (n = 1) exhibited time-dependent inhibition parameters similar to those previously obtained for N3-(4-methoxyfumaroyl)diaminopropanoate, (IV), the most efficient synthetic inhibitor of III reported to date. From the recently elucidated mechanism of III inactivation by IV, the alkylation of cysteine-1-thiol by I and II seems very likely.

L9 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:529816 HCAPLUS
DOCUMENT NUMBER: 105:129816

TITLE: Synthesis of N3-fumaramoyl-L-2,3-diaminopropanoic acid analogs, the irreversible inhibitors of glucosamine synthetase

AUTHOR(S): Andruszkiewicz, Ryszard; Chmara, Henryk; Milewski, Slawomir; Borowski, Edward

CORPORATE SOURCE: Dep. Pharm. Technol. Biochem., Tech. Univ. Gdansk, Gdansk, 80-952, Pol.

SOURCE: Int. J. Pept. Protein Res. (**1986**), 27(5), 449-53
CODEN: IJPPC3; ISSN: 0367-8377

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several analogs of N3-fumaramoyl-L-2,3-diaminopropanoic acid were synthesized and evaluated for inhibition of glucosamine 6-phosphate synthetase activity. The syntheses were accomplished by acylation reaction of N2-tert-butoxycarbonyl-L-2,3-diaminopropanoic acid or N2-tert-butoxycarbonly-L-2,4-diaminobutanoic acid with the N-succinimidoyl esters of several derivs. of .alpha.,.beta.-unsatd. acids followed by deprotection. The obtained compds. were tested for inhibition of glucosamine synthetase isolated from Salmonella typhimurium and Saccharomyces cerevisiae. Among the synthesized compds., N3-4-methoxyfumaroyl-L-2,3-diaminopropanoic acid was the most powerful inhibitor of glucosamine synthetase.

L9 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1985:204266 HCAPLUS

DOCUMENT NUMBER: 102:204266

TITLE: Synthesis of 3,4-iminocyclohexyl-glycine and its N-benzyloxycarbonyl derivative

AUTHOR(S): Dzieduszycka, Maria; Martelli, Sante; Borowski, Edward

CORPORATE SOURCE: Dep. Pharm. Technol. Biochem., Tech. Univ. Gdansk, Gdansk, Pol.

SOURCE: Int. J. Pept. Protein Res. (**1985**), 25(1), 99-104
CODEN: IJPPC3; ISSN: 0367-8377

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 102:204266

AB The title compds. I [R = H, PhCH2O2C (Z)] were prepd. from prepd. from cyclohexenylglycines II (R1 = Z, CF3CO) via an addn. reaction with iodine isocyanate (III). Thus, III was added to II (R1 = Z) to give addn. products IV (R2 = Z, R3 = NCO) as a mixt. of the 2 possible 3- and 4-positional isomers. The latter were treated with MeOH to give the corresponding IV (R2 = Z, R3 = NHCO2Me) (as 2 isomers), which were cyclized in the presence of KOH to give I (R = Z). II (R1 = CF3CO) was converted to I (R = H) via IV (R2 = CF3CO, R3 = NHCO2Me). I (R = H) inhibited glucosamine synthetase.

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=> s glucosamine/cn
L1             1 GLUCOSAMINE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   3416-24-8  REGISTRY
CN   D-Glucose, 2-amino-2-deoxy- (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   2-Amino-2-deoxy-D-glucopyranose
CN   2-Amino-2-deoxy-D-glucose
CN   2-Amino-2-deoxyglucose
CN   2-Deoxy-2-amino-D-glucose
CN   2-Deoxy-2-aminoglucose
CN   Chitosamine
CN   D-Glucosamine
CN   Glucosamine
FS   STEREOSEARCH
DR   58-87-7, 58267-75-7, 2351-15-7
MF   C6 H13 N O5
CI   COM
LC   STN Files:   ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*,
       BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,
       CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES,
       DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
       MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SYNTHLINE,
       TOXCENTER, TULSA, USAN, USPATFULL, VETU
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**, NDSL**, TSCA**, WHO
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.  Rotation (+).
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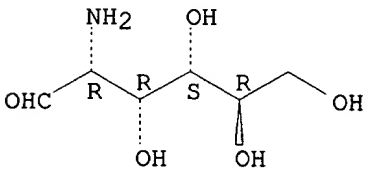


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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            4094 REFERENCES IN FILE CAPLUS (1967 TO DATE)
               6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
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=> s 9030-45-9/rn
L2             1 9030-45-9/RN

=> d

L2   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   9030-45-9  REGISTRY
CN   Isomerase, glucosamine phosphate (glutamine-forming) (9CI)  (CA INDEX
     NAME)
OTHER NAMES:
CN   2-Amino-2-deoxy-D-glucose-6-phosphate ketol-isomerase
CN   E.C. 2.6.1.16
CN   E.C. 5.3.1.19
CN   Glucosamine 6-phosphate synthase
CN   Glucosamine 6-phosphate synthetase
CN   Glucosamine phosphate isomerase (glutamine-forming)
CN   Glucosamine synthase
CN   Glucosamine synthetase
CN   Glucosamine-fructose 6-phosphate aminotransferase
CN   Glutamine-fructose 6-phosphate amidotransferase
CN   Glutamine-fructose 6-phosphate aminotransferase
CN   L-Glutamine fructose 6-phosphate transamidase
CN   L-Glutamine-D-fructose-6-p-aminotransferase
DR   9037-57-4, 9068-84-2
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE,
       TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
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